AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICE CURRENT.

" *O fortunatos nimium sua si bona norint*
" *Agricolas.*" . . . . . VIRG.

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AGRICULTURE.

From the Bath and West of England Society Papers, Vol. X.

AN ESSAY ON MANURES,

BY ARTHUR YOUNG, ESQ.

(CONTINUED.)

CHAPTER VIII.

Of The Sheep-Fold.

To examine the various circumstances of this method of manuring through the detail of sections, would be tedious. There is scarcely a farmer in the kingdom that is not acquainted with the great benefit derived from folding. The immediate application of dung and urine to all soils, and of treading to loose ones, are so well known, that in some late discussions on the *profit* of the practice, no doubts that I am acquainted with, have been expressed on this part of the question. It has rather been a discussion of live stock than of manuring. I shall only remark, that the case of the sheep-fold is a strong confirmation of the purport of the preceding Chapter, so far as the animal part of yard-dung is concerned; for every one knows that sheep's urine and dung are so far from wanting fermentation previous to the application, that the sooner the seed is sown after folding, the greater is the effect.*

CHAPTER IX.

Of Pigeon's Dung.

This manure is esteemed by farmers to be *hot* and powerful, and is measured to the field by the bushel; the more common quantity is forty to fifty bushels per acre. If other sorts of dung were kept equally dry, they would not have the same effect, not equally abounding with volatile salts. It does not, in the house, run into those stages of fermentation which reduce a body to mucilage; and yet has, when spread, an extraordinary effect, affording one more reason for thinking that the common system of yard-dung is erroneous. Nor have I ever heard of any farmer throwing water upon it to promote fermentation.

CHAPTER X.

Pond and River Mud.

There are few manures concerning which, opinions vary more than upon mud cleansed from ponds and rivers. In several registered experiments the benefit has been extremely great; in some others no good, or but little, resulted from it. Some farmers have found it very beneficial to mix lime with it. Some have on experience, determined that it should be kept one or two years; and that it is much better for turning over and exposing thereby to the air. Others have carted it directly from the pond to the field with great success, neither adding lime nor stirring it. These different results are easily reconciled; for, in fact, no two ponds, or rivers, or parts of rivers, are exactly similar. In proportion as the water is resorted to by cattle, or water-fowl, or receives the washings of towns, houses, farm-yards, or privies, the mud must be good, and display its virtue in whatever manner managed. The quality of the water will have influence. The number of leaves that fall or blow into it, will affect it. The natural soil of the sides and bottom creates a difference, whether it be calcareous, peaty, or clayey, &c.

When the circumstances are so numerous which may influence the quality of the mud. no wonder the observations made on its use should be contradictory.

A prudent farmer should examine the mud before he empties the pond; and he may do it with a certainty of discovering its quality and deficiencies. Let him dry a portion, and then fill some garden-pots adding to some, chalk or lime in different quantities, and exposing some a longer and shorter time turned to the atmosphere. He may mix some with the soil of the field he intends it for, and have a pot of the soil only as a standard. This easy experiment is a sure way to discover, by the vegetation of the seeds he sows in the pots, the virtue of his mud. If he do not pursue this plan, let him analyze the mud chymically, and discover whether it be calcareous or ferruginous, or impregnated with any other acid. By means of such easy trials he may proceed safely, and incur no expense that will not answer. I have emptied near a dozen ponds, and some of them large. I have formed composts of the mud, and also carted it immediately to the fields, and there was not more than two in which I doubted whether the manure answered the expense; in general it paid well, but in no case very considerably.

CHAPTER XI.

Sea Weeds.

Wherever these are to be had, the farmers use them with uniform success. Sixty years ago the use was so great and decided in Scotland, that land, which without weeds, would let at only 10s. per acre, let with it from 20s. to 40s. The best sort, and most durable, is cut from rocks at low water.§ In Caithness they form composts of it with earth, kept from six to twelve months. In the Hebrides it gives only one tolerable crop. And in Argyleshire they found most advantages on peat moss or boggy land.† But Mr. Somerville remarks, that on the coast of Haddington they use it fresh, in which state one load is of more service than two which have fermented in a heap. Nearly the same effect has been experienced in the Isle of Thanet. It will be found the same every where, and with nine substances out of ten. Such remarks combine with the question of long and short dung.

CHAPTER XII.

Pond and River Weeds.

Two or three very intelligent farmers in Norfolk have found great benefit in cutting these weeds just before the last plougbing for turnips, and spreading them as manure for that crop. That great cultivator Mr. Coke thus clears his lake every year. A Correspondent of the Bath Society, Mr. Wagstaff, values them load for load as dung; and in another trial the following barley superior to that which followed dunging for turnips.* I have not known composts being made with them; it would be an absurdity.

CHAPTER XIII.

Hemp and Flax Water.

In Yorkshire they observe that the grass grows doubly where flax is grassed, which shews that all the putrid water of the pits should be used as manure.‡

The very ingenious Mr. Billingsley carted flax-water on his land, and the effect was oxtraordinarily great; superior to animal urine,† These very valuable hints should be pursued. And wherever convenient ponds and reservoirs are on a farm, one at least should be half filled in summer with green weeds for the putrid water, which would soon be the result.

CHAPTER XIV.

Burnt Vegetables.

Under the head of Paring and Burning, some explanations relative to this subject were given; and it is to be remembered, that the qualities of the ashes of all burnt vegetables (except marine plants) have a pretty near resemblance; some abounding with larger, and others with smaller portions of alkaline salts. There is, however, a circumstance of practice, which has taken place in some districts in Lincolnshire, which should be mentioned; and that is, the burning straw upon turnip land just before sowing. From three to five tons per acre are evenly spread, and then set fire to; it has been compared with, and found superior to, common dunging. Other facts which combine with this, are the practice in the fens of Cambridgeshire, &c. of burning very stout oat-stubbles reaped high, as a preparation for wheat, which is found both to clean and improve the land; and that of burning straw in the Lincolnshire way for turnips also, which is the common husbandry in the Pyrenees.

It is sufficient to mention these practices. Every enlightened reader will see the necessity of many experiments carefully made, before conclusions should be drawn.

CHAPTER XV.

Ploughing in Green Crops.

This husbandry has for ages been practised in this kingdom, and is common in many others. Yet the reports of individuals of their success have not been uniform; many have found little advantages from it. The practice however keeps its ground in every country; and is found by some persons singularly beneficial. In all such cases it is absolutely necessary, when every circumstance of a trial be not carefully registered, to consider only the results which are successful.

If growing vegetables turned down prove in many cases to be a good manure, it can be only from their fermentation gradually converting them into the food of plants. And in the cases where they do not operate, it must necessarily be from some circumstances of bad management or inattention, which counteract the obvious tendency of the substances to that conversion which is necessary to enable them to act. We have already seen that every vegetable particle under the surface dissolves and yields gasses, which may either be taken up by the roots of plants, or carried away by the atmosphere. But crops may be so imperfectly buried as to convey those gasses into the air, instead of retaining them in the soil. If this point be not carefully attended to, failures may reasonably be expected. What has been observed concerning long fresh dung as applicable here; and it accounts for variations in the results reported. The only way of proceeding is to roll down the crops with a barley-roller and add a skim coulter to the plough, going in the same direction as the roller, to plough six inches deep. To have no other successive tillage than scuffling shallow on the surface. This is an operation the effect of which depends exceedingly on

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* For a remarkable case of this, see Annals, vol. xvi. page 354.

§ Maxwell

† Statistical Account of Scotland, vol. viii. xii. xiv.

* Bath Society's Papers, vol. lv. v.

‡ Middleton's Ann. vol, xiv.

† Report.

the execution. It usually answers better for a summer's sowing, as of turnips, or early winter tares, than for late autumnal sowings.

GENERAL REMARK.

Here are fifteen sorts of Manure, which are usually to be procured on most farms. In the calcareous class, lime, marle, chalk, or lime-stone, Sand, or clay. Burnt earth. Paring and burning. The farm-yard and sheep-fold; and ploughing in green vegetables. The dung of the farm-yard may, on all arable farms, manure from one sixth to one fourth of it, or from seventeen to twenty-five per cent. By a proper course of crops and layers, a certain portion may be pared and burnt; and at least ten per cent, manured by ploughing in green vegetables. A good manager may, by these three exertions manure more than one-third of his arable land every year; which, with a right application of calcareous manures, will keep any land in heart, and regularly in a state of improvement.

PART II.

Of purchased Manures.

It will tend to shorten the inquiry, if these be divided into those of the three kingdoms of nature.

1. Animal.
2. Vegetable.
3. Fossil.

The situation of a farm must necessarily govern all exertions in the purchase of manures. But there are few spots where something may not be done in this way.

CHAPTER I.

Of Animal Manures.

Under this head may be included,

1. Night-soil.	7. Tallow-chandler's Graves.
2. Bones.	8. Woolen Rags.
3. Sheep's-trotters.	9. Currier's Shavings.
4. Hair,	10. Horn Shavings.
5. Feathers.	
6. Fish.	

I shall first give a view of the common practice in the use of these manures, and then consider them collectively under the heads pointed out by the Society.

§. 1.—*Night-Soil.*

This manure is to be had in quantities only in the neigbourhoods of cities. In the vicinity of London it is largely used; and I have had during several years much experience in its application. The common quantity for an acre is about two hundred bushels, but I have tried it in larger portions. It is the best of all manures; and if dry, the cheapest. It does equally well on all soils, and for all crops; but the most profitable application in which I used it has been for grass lands, and spread after clearing away the hay; but I have spread it in all seasons, and found the benefit immense. If kept dry, it is worth 3d. per bushel, and may be had at that price. But if quite pure, and in powder, I would give 6d. per bushel for it, rather than forego the use. It is very durable in effect. Of all other manures it is in a state of powder the best for delivering by drill cups, with turnip seed, in the manner lately practised by Mr. Coke, at Holkham, with rape cake dust.

§ 2.—*Bones.*

Used to a considerable extent about London. The quantity five or six loads per acre, to the amount of two hundred and fifty to three hundred bushels, but varying according to the practice and opinions of individuals. They are collected, broken, and boiled for the grease, and then sold to the farmers. Some years ago they were to be had for 1d. per bushel, but have risen to nearly treble that price, and in some places even more. I have used them largely, and found them excellent for potatoes; they do best on strong soils, and their duration exceeds that of all other manures. The effect has been seen for above thirty years. The dust, the refuse of bone manufacturers, is used also to excellent purpose. This is well adapted to cup-delivery in drilling any sort of seeds.

§. 3.—*Sheep's Trotters.*

These are a powerful manure, and usually sold by that quarter, with feltmongers cuttings. The price some years past was 4s. per quarter; but in the scarcities they advanced, and have not again fallen. Four or five quarters per acre is the common dressing; but I have known eight spread. The effect is great. They should be ploughed in not less than six inches, with a skim coulter; or vermin and dogs will be attracted.

§. 4.—*Hair.*

Hog's hair is sold in great cities from 1s. to 1s. 6d. per bushel, pretty well squeezed into the measure; but depending, as in all uncertain measures, on the attention of the purchaser: from sixteen to twenty-five bushels per acre, the common quantity.

§. 5.—*Feathers.*

These are found to be a powerful manure. I have known them bought at 1s. 6d per bushel, lying close, in a partly-clotted state; and twenty-five bushels an acre spread with much success. But it is registered that ten bushels an acre yielded forty-eight bushels of white wheat The same land unmanured gave but twenty-eight.*

§. 6.—*Fish.*

Every sort of refuse fish is one of the most effective manures that can be carried into our fields. The whale blubber offal is every where applied to this use, and never fails of giving great crops wherever spread. The refuse of the pilchard fishery in Cornwall deserves the same remark. They are dressed with bay-salt; the refuse sold at 6d. per bushel; and immense crops of barley, even to ninety bushels per acre, are said to have been gained by their application.† Herrings in a plentiful take have been applied to the same use in Scotland. In Dorsetshire, Mr. Davis, of Swire, spread them *fresh* at 1s. per load, thin over a field, and ploughed them in for wheat. The crop was so rank that it was entirely laid before harvest.‡ And in the fens of Cambridgeshire, Lincoln, and Norfolk, the little fish called sticklebacks periodically swarm in the rivers to that degree, that a laborer has earned 4s. per diem by selling them to the farmers at ½d. per bushel. They are now risen to 6d and 8d. and great sums are thus invested for forming composts. Major Cartwright, near Boston, found them to exceed whale refuse, probably because used in a fresher state.

§. 7.—*Graves.*

Tallow-chandlers' refuse is purchased at from 2s. to 5s. per cwt.; and from ten to fifteen cwt. are commonly spread per acre. I have seen remarkable effects from them in turnip crops, on poor sandy soils. Dr. Wilkinson, of Enfield, found them far superior to dung for that crop.

§. 8.—*Woollen Rags.*

The price of these have varied of late years considerably; from 5s. to 7s. 6d. per cwt. Chopping them into small pieces is 6d. per cwt. From five to twelve cwt. have been used. It has been an observation of the Hertfordshire farmers, that they do best on dry and sandy lands. They not only, in common with all animal substances, become the food of plants, but also attract and retain much moisture from the atmosphere. Dr. Cullen found that they have a sensible effect for six years.

§. 9.—*Currier's Shavings,*

And furrier's clippings, are bought at London at about 1d. per bushel: but the price varying with *times*. When corn sells well, these and other manures are eagerly sought for, and at high prices; but in bad times the demand is slack, and the price falls. Thirty bushels per acre are a common dressing. They do best on dry soils.

§. 10.—*Horn Shavings.*

These are also bought at about 1d. per bushel, and thirty sown per acre. They are almost equally applicable to all soils, but do best in wet seasons.—The coarser sorts are cheaper, but inferior in effect, though more durable.

§. 1.

The Nature and Properties of these Animal Substances.

All animal substances are resolvable into hydrogen, nitrogen, oxygen, carbon, phosphorus, and sulphur; that is, they contain the principles which by every consistent theory of vegetation are necessary to the food of plants, already supported by earth, air and water, the two latter certainly, and probably the former likewise, formed of these simple principles. The practice of the farmer here goes hand in hand with the philosophy of the chymist; for every husbandman knows, or ought to know, that every animal matter whatever will fertilize his fields.

The nature of these bodies can scarcely be mistaken; and it should be more generally known, that it is the same in all. When any of them are found more *rich* than others, it depends merely on a greater ease of dissolution; some run into fermentation sooner than others, but they all ferment; and by that intestine motion produce more or less of the same principles.

The difference in their active properties depends on this circumstance. Bones will last twenty years; but urine begins to act immediately, and has a short duration: but every one agrees in the main point, of yielding the food of plants.

§. 2.—*Preparation; State; Application.*

There is but one point here to be considered consistently with any degree of brevity; and that is, the question which arises with some, whether to apply them immediately to the soil, or prepare them by fermentation in a compost or dunghill?

The common practice with much the greater part of these manures is to apply them in the state they are purchased; and this conduct combines with a question before discussed, of fresh and rotten dung. If every particle is sure to dissolve in the soil, and by dissolution yield those first principles of these bodies just recited; for what purpose should a previous fermentation be excited, to produce gaseous matters evaporable in the moment of their production, and if not buried, carried off by the atmosphere?

Horn shavings in a heap would become mucilage, yet the best farmers all sow them without preparation; and the more the subject is examined, the wiser will their conduct appear. All turns on the dissolution of a single particle—a point of vast importance, which pervades and ought to govern the whole theory of manuring.

The result will be found consistent with the more general practice. All these substances should be applied to the soil as soon as the farmer's convenience and the state of his fields will permit.

§. 3—*Season; Quantity; Soil.*

The farmer, by purchasing these manures in January, has or should have a power of storing them free from rain or wind, and consequently of using them at the season that best suits his purpose. The only one *properly* applicable as a *top dressing*, is night-soil dry and in powder; all the rest should be ploughed in as soon as spread. There are authors that recommend shewing all or most manures in this method, which is consistent only with the supposition, that as they dissolve the atmosphere does not carry them away. The absurdity is self evident. In proportion to the ease and susceptibility of fermentation, they ought to be spread as soon as it may be before the seed is sown. The *quantity* commonly applied has been mentioned under the respective heads.

As to *soil*, all animal substances act as manures powerfully on all; but the fermentation and consequent dissolution will depend very much on its being loose, friable, and neither quite dry nor very wet.—

* Bath Memoirs, vol. i.
† Report. ‡ Ibid.

On heavy clay soils they will not act with the same energy as on loams, good sand, and the drier calcareous earths. But bones, having a mechanical effect, as well as a fertilizing one, are excellent on such land.

CHAPTER II.

Of Vegetable Manures.

The manures from the vegetable kingdom which are most commonly applied are,

1. Wood-ashes.
2. Peat-ashes.*
3. Coal-ashes.
4. Soot.
5. Peat-dust.
6. Pot-ash Waste.
7. Sugar-baker's Waste.
8. Tanner's Bark.
9. Saw-dust.
10. Rape-cake.

§. 1.—*Wood Ashes.*

From several experiments which I have made in consequence of Mr. Hazenfratz starting a query, whether alkalis were a manure, I found that pearl-ash is a very powerful one; and that it had also the remarkable property of acting on charcoal, (though not by fusion†) by mere mixture and solution in water: the nature of wood ashes is well known; and wherever tried they have proved a valuable manure. They evidently act by their alkaline salt, as well as by classing among the substances which have passed the fire; the effect of which operation in every degree of heat, (small as well as great) is by no means well understood. According to Mr. Kirwan, they contain some phosphorated selenite; common salt and glaubers are also found in them in small quantities; all which in a small dose accelerate putrefaction.—They attract carbonic acid from the air ‡ I have had experience of their use on gravel and loams both dry and wet, and never used them without good effect. The spring is the proper season, and succeeding rain of much importance. Forty bushels per acre the common quantity.

§. 2.—*Peat Ashes.*

In most countries where peat bogs are found, the ashes are a common manure. Their value usually depends on the blackness and density of the peat that is burned. Those of the Newbury peat are the most celebrated, and ten or twelve bushels an acre is a common quantity: whereas in other countries twenty to forty have been usually applied. This difference is the result of the component parts of the ashes. One hundred grains of the Newbury contain, according to Mr. Davy,

Oxid of Iron - - - - - - - -	48
Gypsum - - - - - - - - -	32
Muriat of Sulphur and Pot-ash - - -	20
	100

Where these ashes are used with great success, there is probably a deficiency of iron in the soil. Similar is the result of uncommonly ferruginous peat-ashes, in Bedfordshire, when used on the chalk hills of Dunstable.

The great effects which on some soils attend the use of five or six bushels per acre of gypsum, prevents us, however, from concluding that the whole benefit of the peat-ash is from the oxid of iron; this will depend on the soil, which may possess iron enough; (all have some) and in that case the gypsum may be important. In the Newbury peat-ash no alkaline salt is found. Lord Dundonald says it is not found in any; yet some authors have told us that it contains a 22d part of fixed alkali; but although peat-ashes contain no alkali, the ashes of surface turf on a peaty soil do contain them, of which many cases have occurred; amongst others, see *Brussels Memoirs.*—Their effect is great on dry friable soils. On stiffer ones the quantity used is larger; and, on some clays they have been tried with very little, if any effect.

(To be Continued.)

* The supposed vegetable origin of coal would not justify this classification; but it will conduce to clearness to arrange all ashes in the same division.

† Rouelle, Fourcroy. ‡ Priestley.

For the American Farmer.

NEW-YORK AND OTHER CANALS—ROADS, &c.

NO. I.

The volume lately published in New-York containing all the official documents relative to the superb, and extensive Canals now executing and rapidly advancing towards completion in that state—and also an interesting, handsomely written introduction, is calculated to do much good. Inasmuch as it unfolds the operation of a wise and liberal policy in the state legislature, that could properly appreciate and encourage the expanded views of a few enlightened individuals from time to time, and step by step, until the mass of the population became not only awakened on a great subject, but were induced cheerfully to engage in the enterprize, with such effect, as will probably, in a few years, place the state of New-York in a situation, as relates to wealth and power, that she would not have arrived at in ages by any other means: inducing other states with the flattering prospects of success, "to go and do likewise."

Admitting the trade on the Western Canal to be limited by the boundaries which nature seems to have prescribed, this volume proves beyond contradiction, what many persons in other states, as well as N.York, believed before, viz: that the Western Canal will in a few years redeem the capital employed in its construction, and then afford an enormous revenue to the state, and at the same time so reduce the price of transportation, as to enhance the value of real property in all the western part of the state, more than 100 per cent.

The territory on which this canal will have a legitimate claim for the profits of transportation, either on a part or the whole of its line, is, nearly the whole of the state of New-York west of Albany, the whole of the country north-west of the great lakes above the lower end of Lake Erie, as far as population will ever extend; and all the country south and east of these lakes to the dividing ground between them and the waters of the Mississippi.

This is certainly an immense territory, and will probably after some years yield a freight on the lower section of the canal, equal to the quantity contemplated (to wit) 1,000,000 tons annually. Supposing the navigation to be suspended by frost four months in the year, and a few days taken for repairs, &c. then allowing six days in the week for labor, about 200 days will remain for the navigating of boats. And supposing that two-horse boats of 50 tons burthen each, will be found to be the size best adapted to this navigation, it will require the passage of 100 boats daily. But as the trade will be so irregular, that perhaps five times as many will pass in a given time, at some seasons of the year as at others, it is highly probable that a trade of this extent will be found to be as much as the locks and feeders will at all times conveniently accommodate.

But in the course of the reasoning found in the introduction to the Book under consideration, it seems to be taken for granted, and supposed to be proved, that the city of New-York is not only to command the trade of the territory just described, but to furnish the inhabitants of the valley of the Mississippi with all their merchandize, and to receive their agricultural and other products in return: and of course Philadelphia, Baltimore, and other southern atlantic cities, must be content to divide the trade of the small strip of land between the mountains and the sea-board among them in the best manner they can.

Now it is not intended to deny this position. But as it is also stated, that all this is to be effected by means of the Western Canal, some doubts are entertained whether this would be the most eligible channel through which this branch of the New-York trade ought to be conducted. A little attention will therefore be bestowed in the examination of the subject, and if the plan that has been proposed should be found inadequate to the object, another grand scheme is held in reservation ready to be offered for acceptance, in case of any prospect of failure in the first.

It often happens to the best of us, that when we become enraptured with a favourite object which we have ascertained will really be useful, in the ardor of our zeal we persuade ourselves that more good will be produced from it than nature ever intended; or than can be extracted from it by nature and art combined.—This may possibly have happened to some of the eulogists of the Western Canal. We have seen in the introduction before mentioned, a decorated picture of this great work and its effects, drawn by a master-hand. It is probable we may have viewed it in a milder light than it was intended to have been exhibited, and therefore have not been dazzled by the rays of splendour, which, under other circumstances, are reflected from almost every part. We are almost tempted to ask the question, Whether a little more shade introduced as an off-set, to the many highly illuminated parts, might not have rendered the picture still more perfect? We suppose, for instance, that this navigation will be suspended by ice about four months in the year—we also suppose and believe, that there will be more uncertainty and greater difficulties to be encountered, in communicating with the Ohio, than has been contemplated.

Those who are acquainted with the western waters, very well know, that they are subject to very great diminution from drought;—those that derive their sources from the Alleghany Ridges partake largely of that character—admitting then that a canal should be made from Erie to French creek, it might happen that a boat freighted with New-York merchandize, after passing that Canal, would find the creek too low to proceed on her voyage to Pittsburg, and might possibly have to wait many weeks, and even months, for a rise of water—for it is very well known, that this stream does not usually afford sufficient water for navigable purposes during the latter part of summer, and most of the autumnal months. Even the Alleghany itself, for some distance below the mouth of French creek, is frequently for months in succession too low to admit the passage of loaded boats.

But are we quite sure that a sufficient supply of water can be obtained in a dry season to supply the summit level of a Canal on this route? If this has ever been ascertained by a competent engineer, we are ignorant of that circumstance, and until we are better informed, some doubts will exist on the subject. And, strange as it may appear, we are equally as sceptical with regard to the proposed communications further westward. Not that we deny a single position contained in the introduction.—We admit that the waters of the Cayahoga and the Muskingum approach within six miles of each other; that the Sandusky and the Sciota have their sources in the same swamp; that the Miami of the Lake, and the Miami of the Ohio have their rise on the same level; that the sources of the Maume of Lake Erie, and the head waters of the Wabash, would intermingle (at some seasons) with very little labour; that the raising of Lake Erie and the St. Joseph's of Michigan, are contiguous in their head waters; that the southern waters of lake Michigan and some of the branches of the Illinois interlock, and that at one place at a particular season of the year their waters afford a navigation from one to the other— at another season there is only two miles portage, at another seven, and at another fifty miles. We also admit that this dividing ground exhibits a vast extent of high level country, the inclination on each side of the dividing line of the waters being so small, as to "seem almost insufficient to decide their course." Yet supposing canals opened at all these places, we have doubts and difficulties in ascertaining the measure of their usefulness; because we believe that their summit levels would be found a considerable portion of the year without water.

Level districts of country lying at the foot of mountains or below high contiguous lands are generally favourable for Canals, because the expense of crossing deep ravines is in a great measure avoided, and feeders may mostly be obtained from streams that have their sources considerably above the line of Canal.

Mountainous countries afford greater facilities for passing dividing ridges by Canals than might at first view be expected. It often happens that the dividing ridge is very much depressed in consequence of a branch from each side heading nearly opposite. In this case there is generally a considerable body of land that is elevated far above this depressed point, and of course produces at least the probability that springs may break out above this level, which may be collected and conducted to it, or, as mountainous streams have generally much fall, that some one may be intercepted high enough to supply the summit level. If neither of these can be effected, as such ridges are generally narrow, it may probably be tunnelled at a lower level where the water may be brought at a comparatively moderate expense.

But of all the forms which the face of an extensive and diversified country presents, that which is exhibited between the branches of the Ohio and those of the Lakes, is the most unfavourable for obtaining a supply of water on summit levels in dry seasons, when such a form is connected with an elevation above the surrounding country, and this is the fact in the present instance.

When a substratum of dense earth pervades such a district of country, the melting of snow, and the great rains which usually fall in the latter part of winter, at times literally covers the ground with water. But as the cause ceases to operate, the water passes slowly off, and is seen only in the most depressed places forming shallow ponds, which are often many miles in extent: small interrupted outlets and evaporation by degrees diminishes these, so as only to present the appearance of extensive swamps, where the winter and spring waters are still in part retained by the boggy soil, covered by water grasses and shrubs, but the summer drought so effectually drain them of their moisture, that very little if any water is seen to flow from them. For, here we are not to look for large and permanent springs; these cannot exist without a body of elevated land somewhere in the neighborhood.

The time is past when philosophers could be amused with the notion that capillary attraction and other subterraneous magic, were competent to raise water from the bowels of the earth, and discharge it on the summit of high mountains. In the present day permanent springs are not found even on very elevated plains. It is true, in those places which are a little depressed and swampy, while the surface around is generally moist, water will ooze from the earth; but a summer sun, and dry weather soon exhausts their resources.

These gradations, from a great superabundance of water, when swamps become navigable, to an absolute absence of that fluid, are very happily described in the Introduction. In the case that seems to be most relied on for a communication between Lake Michigan and the Illinois, it is said, as before stated, that at one season of the year there is an uninterrupted navigation; at another season there is a portage of two miles; at another seven, and at another fifty miles.

With these facts before us, we should not be surprised if an engineer should traverse the whole dividing ground from the eastern boundary of the state of Ohio, to the junction of Lakes Huron and Michigan, thence between the waters of Michigan and Illinois, without being able to find a single place where a full and permanent supply of water, for a large trade, can be obtained, for a summit level; or any spot where the length of a tunnel would not be too great even to induce a single serious thought relative to its execution.

But it is said, the ground for the Ohio Canal has been examined and found practicable. It may have been examined, but perhaps not with that degree of care and accuracy necessary to form a decisive opinion in such an important case. Whenever we see a detailed account of its having been done by a competent engineer, with suitable instruments, and thereby ascertained that a stream of water can be conducted across the dividing ground sufficient to drive a pair of five feet mill-stones forcibly by a 14 feet over-shot wheel, in the driest seasons, then we shall certainly give credit to the practicability of constructing a navigable Canal, the whole distance from Lake Erie to the Ohio River. But then we must also believe that there has been some little mistake in describing the ground as being almost perfectly level.

We will not presume to say that New-York cannot effectuate a permanent water communication from Lake Erie to Lake Michigan, and thence to the Illinois River in one month; but we think when she does accomplish it in that time, she will be entitled to credit for a full month's work.

On casting our eyes over a Map, and discovering that the branches of different streams interlock, we are apt to believe there will be little difficulty in connecting them by a canal. It is time this deception was done away. Recent experience has proved, that in many instances where the connecting of water courses has long been thought quite practicable, the application of the level gives a different result; and proves that dividing grounds present greater obstructions to internal navigation than many suppose.

Many very important Canals may be opened in various parts of our country; but they are not likely to be the sooner accomplished by entertaining the erroneous opinions that these facilities are more numerous than they really are. It may have the effect in some degree to distract attention, and prevent those who are interested from uniting in, and prosecuting with effect, plans that would lead to usefulness, wealth and prosperity.

There is another part of the Picture that has attracted our attention, on which we are willing to make a few remarks. It is stated, that amongst other things the Canal is to furnish the Mississippi valley with Salt, from the Onondaga Salt Works, to an immense amount. Because it is said, it may be delivered at Pittsburg for $5 31 per bushel; and at Louisville for $5 50; and that the Kanawha Salt cannot be afforded for less than $6 per barrel.

So far as relates to the Kanawha Salt, there appears to be a little error in information. In August last, by actnal inquiry on the spot, it was ascertained that 50 furnaces were then in blast, averaging about 60 bushels per day each; which gives, for the whole daily product, 3000 bushels; and that a great proportion, if not the whole of this large quantity, might have been purchased for specie or eastern paper at from $3 to $3 25 per barrel or something less than 50 cents per bushel. From the spirit and activity with which the works were then carried on, it would seem that no money was lost at these prices. Now if it will cost but 19 cents to transport a barrel of N. York Salt from Pittsburg to Louisville, as it is but about two-thirds of the distance, and a better navigation, a barrel may be carried from Kanawha to that place for 18 cents, which at the most will amount to but $3 38; the difference is $2 12; one half of which it is believed would carry it to Pittsburg; and proportionally less to the intermediate points.

It is true the manufacture at Kanawha has been conducted rather more with a view to quantity than quality. But it only requires a little additional labor to produce salt of an ex-

cellent quality; and whenever labor can be more profitably applied in improving the quality than increasing the quantity, the change will certainly take place. From what we have seen of the process, it is believed that two or three cents per bushel of extra labor well applied, would render this Salt nearly equal to the best manufactured in the Western Country. These works have the advantage of inexhaustible supplies of coal in their neighbourhood when their stock of wood fails. Several have already availed themselves of this all important resource.

It is stated that no water in the United States is equal to that of the Saline in New York. We have never tasted that water, but we know from actual inspection, that the water from King's old well, on the north branch of the Holstein, will dissolve no more salt; it is therefore saturated.

At a time when food for news-papers is so abundant, we have certainly written enough for one number, and have only just arrived as it were at the threshold of our argument, to prove that the Western Canal ought not, and cannot constitute a link in the chain of communication by which New-York is to furnish the valley of the Mississippi with merchandize, o receive its products in return. We hope however, that in the next number we shall not only be able to get through with the examination of our evidence, but to make a full display of our grand scheme for effecting this great purpose with more certainty and economy.

LOOKERS ON.

Jan. 29, 1822.

FOR THE AMERICAN FARMER.

CABBAGE PLANTS.—How best Raised.

Mr. Skinner,

A very erroneous practice has long prevailed with respect to the method of propagating cabbage plants; and although I may be laughed at by experienced gardeners, (for I dont profess to be a nice gardener,) for innovating on their prerogative; still I will venture to suggest a mode which I believe all will approve after trying it.

The common practice has been to sow cabbage seeds on very rich ground, in order to have early plants, and many estimate the value of their plants for transplanting, in proportion to their large size—but I do not.

If you sow your seeds early, on very rich ground, they progress rapidly; and, if sown thick, as is commonly the case, soon acquire a small slim stem, and small top—and, if sown thin, they will be too large to transplant before the proper time, for a winter crop.

If you sow your seeds late in the spring, you cannot be certain of succeeding. The plants, as soon as they appear above ground, are frequently destroyed by a small black flea, especially if the weather proves dry, and it is difficult to preserve them. I have tried many remedies without success.

Some years ago, after I had sown a large bed of cabbage seeds early in the spring: I determined to procure a variety, and from the seed stores I was furnished with eight or ten different sorts—they did not come to hand as soon as I expected, and I believe they were sown about the first of May, on rich ground: the season proved dry, and as soon as they appeared above ground, they were destroyed by the flea. I entirely failed with them, and was obliged to have recourse to my bed sown early in the season.

Instead of sowing my cabbage seeds on rich ground, I have for several years past chosen the poorest part of my garden, and sown my seeds as early in the spring as the frost would admit. The continual moisture of the spring will soon cause cabbage seeds to vegetate and grow on poor ground; and the flea does not often injure them when sown early. If any are wanted for early transplanting, they can be forced by sprinkling a part of the bed with lie from around the manure heap: and a portion of the plants can be thus forced all through the season, so as to have them of proper size at any time Those on the poor ground not manured soon acquired a dwarfish appearance, and will remain so all the season, unless watered or manured as directed, or transplanted to rich ground, when they will grow vigorously if the season should prove favourable.

I do not prefer to transplant large plants; for small plants do not wither and fall so much as large ones. I shall hereafter pursue this method, and I ask others to try it, before they condemn the practice.

A.

FROM THE NEW YORK STATESMAN.

Woolen Manufacture.

The present is a period highly favourable to the establishing of woolen manufactures, and I am desirous of conveying some hints, through the medium of your excellent paper, to those who may be about engaging in such concerns.

The ultimate success or failure of any business, will very much depend on the manner in which it is put into operation, and in none, is this axiom so certainly verified, as in the making of woolen cloth; for its branches are very numerous, and each one must be well executed, before the article can be turned out in the best manner.

I know of no woolen manufactory that is managed by persons understanding the business; it is true, Europeans are employed in some of the branches of every factory, but I believe there is scarcely one, that is managed by an individual, who has a knowledge of all its manipulations. It is not necessary that a manager should be a perfect workman in every branch, but it is indisputably requisite, that he should know when every part is well performed, and be able to point out the cause of any, and every defect.

I have known many factories in this country, where, for want of one or two branches being well performed, the cloth, when finished, has not been worth as much by one tenth, as it ought to have been; there has consequently been a loss of ten per cent on the returns, arising from defects, that might have been avoided without any additional expense. Defects that commence with a factory, are apt to acquire stability as it progresses, and it is no slight undertaking to oblige workmen, who have been long grounded in error, to undo, what they have been instructed to consider as being perfect workmanship.

There is probably no woolen factory in the United States, where the owners have not suffered severe losses, by purchasing machinery that has proved inadequate to the performance of the objects for which it was intended. This evil may be avoided, by employing some competent person to superintend and direct the laying in of the machinery; but should it be ordered by any one ignorant of the business, the loss, usually attending such a commencement must necessarily ensue.

Foreigners are often employed to direct factories from the beginning, who are masters of only one or two of its branches; the result has been that such parts of the machinery, as they were conversant with, have been well laid in, whilst other parts have been very defective.

This difficulty will always occur, where common workmen are intrusted with the undertaking generally: for no person can be ignorant, that foreign mechanics and manufacturing workmen are not acquainted with more than one or two branches of the business they profess to understand.

Englishmen, coming from different manufacturing countries will vary very much in their mode of working as well as in the kind of machinery they have been accustomed to work with; this difference arises from two causes; first, from the quality of the goods made in each county; and secondly, that in some counties machinery is more generally used than in others. The counties in which woolens are mostly fabricated, are Yorkshire, Wiltshire, Sommersetshire, and Glostershire; the first is in the north, and the three last in the west of England. I know nothing of the manufactories of Ireland, but I suspect they are mostly confined to goods of low quality, as that country affords the best market for English superfines. The cloth made in Yorkshire and Sommersetshire, is mostly of inferior quality: to this rule there is some exceptions, as Hurst in the former, and Sheppards of Frome in the latter. In Wiltshire, they make about an equal quantity of low and fine qualities, whilst the County of Gloster is entirely confined to the fine trade, and machinery is more generally used than in either of the others.

A workman from Glostershire knows nothing of raising the nap, or of shearing by hand, because in the county he comes from, those branches have been long performed by the gig-mile and shearing frame; such as come from the other counties can do both, as some of the makers there have their work done by hand, others have it done by machinery.

Having stated some of the difficulties manufacturers have to encounter, in employing workmen, I shall proceed to notice each of the operations to be performed, and should the statement be beneficial to the progress of manufacturing, I shall be amply compensated for my trouble.

Purchasing of Wool.—This should be always done by some practical workman who is a

judge of the article: as the profits of the business will depend, in a great measure, on the quality of the staple commodity. I have heard it observed by an experienced maker, that the smallest haired wool does not always make the finest cloth. In purchasing in the fleece, it will be necessary to notice more the general quality than that of any small portion of it.

There is a material difference between old and new wool; old of the same quality will never handle as soft when in cloth, as new, nor will it draw into as fine a thread on the jenny.—This remark must be considered as applying more particularly to wool after it is scoured, than before, for wool when scoured, and laid by for any considerable time, will become harsh, and never recover its original softness: hence the reason why Spanish wool, of any given quality, will not make cloth as fine as Saxony, or American of the same grade. The Spaniards scour their wool soon after it is sorted, and it is often two years before it is in cloth.

Sorting.—The principal thing to be attended to in sorting, is to take care that the different sorts are regular in their qualities, and not to have them too numerous, four, or at most five, being sufficient for any description of wool.

Wool Scouring.—Unless this operation be well performed all the subsequent ones will be injured. The wool has to be cleansed from a soft faty substance, called the yolk. There is no choice of material, as human urine is universally used. The volatile alkali of the urine combines with the extraneous fat of the wool, and a soponaceous compound is formed that will readily pass off in water.

The liquor used in England for scouring fine wool, is composed of one part of stale urine, to two of water: immerse the wool at about 125° Fahrenheit, let it lay, after well stirring, for fifteen or twenty minutes, then land it on wooden bars over the furnace to drain. When drained, it should be washed in a basket, or some other similar machine, placed in a moderate current of water, until that fluid passes through it perfectly limpid. Some wool requires a greater, and some a less proportion of urine; if too much is used, the wool will be stringy, and difficult to work, and if too little, it will not be clean.

I have known potash used in this process, which is worse that useless, as will be explained, when I treat on the art of dying. If wool will not cleanse in the usual menstruum, the best substitute will be soft soap.

The older the urine is, the more certain will it produce the desired effect; for the salts contained in the new are mostly acid, and in that which is stale they are mostly alkaline. It is said not to arrive at its greatest degree of perfection in less than a year. It should be kept in close vessels after having been exposed to the atmosphere for a few weeks.

Dying.—The low qualities should be dyed blue or some saleable mixture, the finest may be colored black.

I would recommend *the blue that is Woad dyed as far superior to any other.* The ash or indigo vat is generally used in this country, but the color does not wear well. I have seen garments of this color that were a dark blue when made up, become almost white after having been worn a short time; which proves, that wool is rather painted than colored in this process.

Ash dying is injurious to the manufacturer, as well as to the public; for it is a well known fact that potash will dissolve wool at a temperature many degrees below boiling heat. That a portion of the wool is dissolved in ash dying will be evident to every scientific reader from the following description of the process, and of some of the facts connected with it.

In setting an ash vat, two pounds of caustic potash is used to every pound of indigo, together with strong bran and madder water; this quantity of indigo is expected to color ten lbs. of wool, but not without an additional quantity of caustic potash. The general temperature of the liquor for dipping is 125 deg. Fahrenheit: after working a few days, the liquor becomes so fat, as to render it necessary to throw a portion of it into a furnace, and to boil it with a quantity of bran and madder, to separate the oily matter, the liquor had dissolved from the wool.

Cloth made from wool dyed in the woad vat, will *full in* sooner, and, when finished, will handle one quality finer than that which has been colored in the ash vat.

It is clearly proved by the facts above mentioned, that ash dying robs the wool of a portion of its soft unctious matter, and that the quality of the cloth is injured by what has been subtracted.

Any person may be convinced of the solubility of wool in potash by making the following experiment—let them dissolve one pound of potash in water of 190 deg. Fahrenheit, into which put three pounds of wool, and they will soon dissolve, and the product will be soft soap.

A vat for woad dying should be seven feet six inches in depth—seven feet six inches in diameter at the bottom, and six feet on the top; should be made of clean deal plank two inches thick, and be well secured with stout iron hoops.

A vat of the above dimensions may be set with five hundred and sixty pounds of woad, thirty pounds of indigo, six pounds of madder, and two pecks of bran. When blue veins appear in the liquor, and the bead and scum are of a rich purple color, add half a peck of fresh burnt lime, previously dry slacked; from this time the liquor must be stirred every two or three hours, and lime added at each stirring, until enough has been given, which can only be known by experience, as two makings of woad will never take the same quantity. When the vat is well at work, dip one wet of wool, about forty pounds, and return the wet once; then repeat the liquor, and add to it fifteen pounds of indigo and a suitable quantity of bran and madder; from this time it may be worked every day for six or eight months, adding indigo twice a week, and one hundred of woad every Saturday until ten hundred has been used. This vat, in the hands of a skilful workman, will color many thousand pounds of wool.

The manufacturers of this country have been accustomed to work all the indigo out of the ash vat in a few days, and they appear to be afraid of risking as much in the woad vat, as will give it a fair trial; but they may be assured that any attempt to work a woad vat, that shall be weak of woad and indigo, will end in their own disappointment, and bring the dyer into disrepute however eminent he may be in his profession.

In a work edited by Thos. Cooper, Esq. published in the year 1815, are the following observations on the woad vat:

P. 23. "I am in doubt whether much is gained by the woad vat altogether here; and considering the value of labor, perhaps we do not lose much by confining our blues to the indigo vat."

P. 40. "Five pounds of indigo of the best kind contain near as much colouring matter as two hundred pounds of woad."

One acre of prime land will produce two tons of woad in one season. I planted two acres in this country from which I obtained three tons; the land had been worked many years and was not in the best condition; the expense including rent, cultivating, and making, was about one hundred and fifty dollars, not exceeding that sum. If woad will afford two and a half pounds of indigo for every hundred, as asserted by Mr. Cooper, and thirty hundred can be raised on an acre of land of middling quality, surely, there can be no reason for objecting to the use of the woad vat from a motive of economy.

What Mr. Cooper means by "considering the value of labour, &c." I cannot comprehend; for where a woad dyer can have access to a full complement of materials of good quality, the woad vat will turn out more colored wool in a given time, and with less expense for labor, than the ash vat.

HOPSON.

From the New York Statesman.

COTTON.

Cultivated on Long-Island and in the State of Illinois, Lat. 39° North.

Messrs. Carter & Prentiss,

In addition to the evidences which I have already adduced in proof that Cotton may be raised with advantage on Long Island, and the sea-board of New-Jersey and Connecticut, I have to state, that a gentleman of this city, several years since, planted some cotton seed in his garden; the plant thrived well and without the aid of "artificial means," the bolls were well formed and large, and produced cotton of good quality. The same gentleman has since, *from seed raised here*, annually cultivated cotton as an ornamental shrub, it has invariably come to maturity and produced fine cotton. The following article from the Washington City Gazette, shews that cotton has been cultivated on the Wabash, in the state of *Illinois*, about the 39° of north latitude, and in point of climate, not less severe than that of Long-Island and New-Jersey. These new proofs, I hope, will encourage some of our farmers to make experiments that will decide whether cotton can be safely cultivated as a regular and profitable crop. To enable these experiments to be made, I have sent for several barrels of cotton seed; as soon as it arrives, which I expect will be in the course of a month or six weeks, it will be deposited at *your office* for distribution.

AGRICOLA.

Illinois Cotton.—We learn from the best authority, that during the past season, cotton and wool, the growth of the eastern part of Illinois, have been discovered to be of a superior quality. The prairies, with which that state abounds, are said to be peculiarly favorable to the raising of sheep and the cultivation of cotton. A Mr. Benedict, who recently removed from this neighborhood, arrived in town a few days ago, with a waggon load of cotton, raised last season on the Wabash, which he offered in our market at 18¾ cents per pound. It is pronounced by good judges to be of a very superior quality. It will be a fortunate circumstance for the young state of Illinois, should these articles of raw material be extensively produced. The prairies, when broken up, are but little affected by grass or weeds, and may be cultivated to much greater advantage than any other lands. We understand that the planters in Illinois have made arrangements for raising as much cotton as will supply every reasonable demand from our great commercial cities, and to afford it as low as it can be had in any part of the United States.

FOR THE AMERICAN FARMER.

Kentucky Agricultural Society.

At a meeting of sundry farmers from different parts of Jefferson County, state of Kentucky, held agreeably to public notice, at the house of Robert Buckner, esq. on Tuesday, the 28th day of December, 1821, Abraham Hite, Esq. being called to the Chair, and William Chambers appointed Secretary, the following resolutions were then adopted:

1st. *Resolved*, That agriculture is considered by us as the true basis of national prosperity and happiness, meriting the attention of the patriotic and wise, in every section of our country.

2d. *Resolved*, That a Society be formed in Jefferson County, to be stiled the Kentucky Agricultural Society, whose object shall be the improvement of agriculture and rural economy; to be composed of practical farmers, and other persons disposed to assist in so laudable a purpose.

3d. *Resolved*, That Abraham Hite, John Rowan, John Speed and Saml. Churchill, Esqs. be and they are hereby appointed and requested to serve as a committee to draft a form of Constitution for the government of said Society, and that they or any three of them report the same to a meeting, to be held at the house of Robert Buckner, on Tuesday, the fifteenth day of January next.

4th. *Resolved*, That the proceedings of this meeting be signed by the Chairman, and attested by the Secretary, and that they have them published.

5th. *Resolved*, That this meeting adjourn to meet again on the 15th day of January next.

ABRAHAM HITE, Chr.

WM. CHAMBERS. Sec'ry.

What is the intrinsic relative value of Barley, Buckwheat, Indian Corn, Oats and Rye—when used as food for Hogs, Horses, and Cattle?

To the following inquiries touching the intrinsic value of several kinds of Grain, for the home use of farmers and their animals, we thankfully give place; and we fondly hope that some of our many practical agricultural correspondents, may enable us to answer them satisfactorily—that is to say, by a strict detail of their experience in the matter.

The knowledge which our correspondent wishes to acquire, is very important to every farmer; and we believe that he may soon obtain it—for that day has certainly passed by in this country, when, in connection with the interests of Agriculture, it could have been truly said, that "what was every body's business was no one's." The object at which our correspondent aims, is, we think, entitled to the notice of Agricultural Societies—they might call for and reward the most judicious setts of Agricultural experiments connected with the subject: and we persuade ourselves to believe, that it is within the power of any one of these associations to command satisfactory and very useful answers to his questions; but, meanwhile we would gladly receive such information on the case, as any of our readers may be disposed to furnish. *Editor.*

FOR THE AMERICAN FARMER.

WORCESTER, MASS. March, 1822.

INQUIRY.

"Whereas our farmers usually raise a greater quantity of grain than is wanted for the consumption of their families and stock, and are frequently uncertain what particular kind of corn to dispose of, because they do not know the intrinsic value of the different species of grain; and whereas, this cannot be correctly ascertained by the market prices, which are constantly fluctuating in consequence of adventitious circumstances, I beg leave to enquire in behalf of myself and others, of you and your correspondents, what is the relative value of Barley, Buckwheat, Indian Corn, Oats and Rye, as food for hogs, horses and neat stock? satisfactory answers would enable us to ascertain what particular part of our surplus produce might be offered for sale, consistently with good husbandry. Barley, I am aware, is not often raised in this part of the country as food for stock, and probably is less valued, as such, than it should be. If it is good food for horses in the East, and history informs us that it is the only grain given to horses in Asia; it surely cannot be bad food for them in the West. I have considered a crop of Barley as more profitable, and not more exhausting to the land, than a crop of Oats; but in this opinion I may be mistaken, for I have not had sufficient experience to speak with confidence, on this subject, as I hope some one will, who can speak from his own observation.

I am Sir,
very respectfully,
Your most ob't and humble servant,
J. W. L.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 15, 1822.

PRICES CURRENT.

Flour from the waggons, superfine, $6½—Wharf flour $6 per bbl.—Wheat, white, 133 to 135 cents—Red, 130 to 132—Corn, white, 70 to 71—yellow, 64 to 65—Rye, 65—Barley, 60—Oats, 30 to 40—Beans, 130 cents per bushel, wholesale—GRASS SEEDS, Clover, $8—Timothy, 4½—Orchard, 3½—Herds, 3 per bushel, at retail—SALT, coarse, 54 to 65 cts—Liverpool ground, 50—do. fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl—Mess Beef, $11—do. Pork, 13—Herrings, 2½ to 2¾—Shad, 5½ to 6 per bbl—Codfish, 3 to 3½ cts—Hams, 11—Cheese, 11—Butter, 20 to 25 per lb.—Eggs, 10 to 12 cents per doz.—Cotton, Georgia Upland, 17 cents per lb.—no Louisiana or Alabama in market—TAR, 175 cts.—Turpentine, 175 to 200—Rosin, 150 per bbl—Spirits of turpentine, 35 cents—Varnish, 30—Linseed Oil, 73 per gallon—TOBACCO, old crop Maryland, no yellow, or fine red in market—good Patuxent red 6 to $9—common 4 to 5—second 1½ to 3 per 100 lb. in demand—Virginia, a few hhds from Richmond were sold this week at $6—and some from Kentucky at $5 per 100 lb.

As the season advances, we cannot delay the insertion of the following CATALOGUE OF FRUITS, for sale by JOHN WILLIS, Esq. Collector of the Port of Oxford, Talbot county, Md. We have had occasion before to speak of the excellence of Mr. Willis' Fruit, and the great skill of the cultivator: [*Ed. Am. Farmer.*

CHERRIES.

1. The May or Buck Heart
2. The Bastard do
3. The Black spotted Caroon or Carone,
4. The White Grafton Cherry
5. The do. do. late do.
6. The do. Harrison Heart
7. The do. Spanish do.
8. The do. Halifax do.
9. The do. late White do.
10. The May Duke
11. The large do.
12. The late do. (Comes late)
13. The large Morello
14. The small black do.
15. The do. late do.

APRICOTS.

1. The Roman Apricot
2. The French Brussels.

PEARS.

1. The Early Pear, (comes in June)
2. The do. Red Muskedelle, (4th July)
3. The July Pear
4. The French Pear
5. The large Bagpipe of Anjou
6. The do. Musk-Boncretien
7. The French Vergouleuse
8. The Lapoire or Blessed Pear
9. The Hampden's Bergamot
10. The Autumn do.
11. The Cuisse Madame, French Targonelle, or Lady's Theigh,
12. The Crasane Pear
13. The Winter Boncretien
14. The Colmar Pear (winter)
15. The Green Sattin Wood Pear
16. The Winter Pear, supposed to be the Monsieur John
17. The large Pound Pear, to preserve,
18. The St Germain
19. The Supreme Pear
20. The Little Summer do.
21. The Small Autumn do.

PLUMS.

1. The White Harvest Plum
2. The Royal Blue do.
3. The Large Sweet Green Gage
4. The Small do. do.
5. The Globe Gage
6. The Blue do.
7. The Empress Plum (dark red)
8. The Great Mogul do.

9. The Red Imperial Magnum Bonum
10. The Blue Pendragon
11. The Holland Prune, red and purple
12. The German do. large and blue
13. The Peach Plum
14. The Orleans do.
15. The Chickasaw do. for Gage Standards.

DAMSONS.

1. The Large Purple Damson
2. The Small do. do.

PEACHES.

1. The Early Musk Burgami Peach
2. The White Open Peach
3. The Milk do. do.
4. The Newington do.
5. The Large Early Newington Peach
6. The New do. do.
7. The Old do. do.
8. The Carolina Clingstone do.
9. The French Pavia
10. The do. Musketong
11. The Indian Blood Peach
12. The large White October Cling-stone
13. The do. do. Heath Peach
14. The Mignonne do.
15. The Thompson do.
16. The Virginia Cling-stone
17. The Large Red Open-stone
1 . The Red cheek'd Mellecatoon
9. The Lemon do.
20. The Georgia Cling-stone
21. The Small Red do.
22. The Pine-Apple Peach.

NECTARINES.

1. The Newington Nectarine.

APPLES.

1. The Early Rhode Island Apple
2. The Large Pound Pippin
3. The Golden do
4. The Holland do
5. The Newtown do
6. The Orange do
7. The Green do
8. The Poplar Island do
9. The Long English Golden do
10. Dr. Priestly's do
11. The Winter Red Streak
12. The Gray House or Gricksan
13. The Yellowish Cart House
14. The Redish do do
15. The Sweed Apple
16. The Long Island Apple
17. The Siberian Grape Apple.

GRAPES.

1. The White Sweet-Water or July Grape
2. The French do do or Muscat do
3. The American Purple do
4. The Guernsey do
5. The Red Hamburgh do
6. The Jersey Black do
7. The Red or Purple Constanta do
8. The Tokay or White German do
9. The Large Red Oval do
10. The Large Black Muskadine do
11. The Large White do do
12. A fine Grape from Philadelphia, name not known.

WALNUTS.

1. The White Walnut
2. The do thin shelled.

FIGS.

1. The Genoa Figs.

I have from 15 to 20 sorts more, that I have not had a chance of knowing much of yet—besides, a parcel of Shrub Fruits, which I suppose not worth mentioning, though very fine.

I expect to receive more sorts next spring: and such as took the attention of the people most, for the last three years, I have propagated for sale, as I have found many gentlemen wished to obtain the sorts, and when they received cuttings of me, were not always successful.

JOHN WILLIS.

Agricultural Premiums.

SOUTH CAROLINA.

The Farmers Society of Barnwell District will award the following Premiums, each to consist of Twenty Dollars, or a Silver Mug of that value, at the option of successful candidates, at their stated meeting in January 1823.

1st, For the greatest quantity of *Grain*, the produce of one acre of *High Land*.

2d, For the greatest quantity of *Grain*, the produce of one acre, of either *Swamp* or *Pine Land*.

3d, For the greatest quantity of *Rice*, the produce of one acre of either *High* or *Low Land*.

4th, For the greatest quantity of *Root* or *Slip potatoes* the produce of one acre, of either *High* or *Low Land* the acre to be square, and not more than 210 feet square; the crops must be planted and harvested, within the period of 12 months.

5th, For the best *Calf*, one year old, raised by the competitor and exhibited at the said meeting in January; this premium to be continued annually, until the animals reach the age of five years.

6th, Also a Premium of Ten Dollars, or a Silver Mug of that value for the best *Hog*, raised by the competitor, not more than one year old: this premium to be awarded annually until the animals reach the age of three years. Should the animals exhibited not be deemed above mediocrity, the Society will not award a premium. Relative to the Crops, a detailed account of the mode of culture and preparation of the land, is requested. It is expected all candidates will produce such testimony as to prevent any doubts relative to the correctness of their statements, in regard to the age of their Animals, and the produce of their Fields.

JOHN S. BELLINGER, *President*.
JENNINGS O'BANNON, *Sec'ry*.

Barnwell Court House, Jan. 28th, 1822.

SEEDS.

Fresh, new and good—the growth of 1821.

JOSEPH P. CASEY,

SEEDSMAN, &c.

No. 2, Hanover-street,

HAS received from London, Liverpool and Harlem, an early supply of

GARDEN SEEDS, &c.

By New York—including the following:

30 varieties of early and late Cabbage Seeds
12 do of early and late Peas
12 do of early and late Raddish, long & short, red, white and black
12 do Lettuce, some sorts exceed the size of Cabbage
10 do of Turnip
6 do Carrot and Parsnip, one sort of the Carrot grew nearly out of the ground, the same as described in the American Farmer.
6 do Cauliflower and Brocoli Seeds
12 do Melon and Cucumber do
50 do Pot and Medicinal Herb do
200 do of other vegetable do
100 do Flower Seeds

A quantity of *Northern Seeds*, the growth of 1821.

Agricultural Seeds.

Luzern, Mangel Wurtzel, Ruta Baga
Field Peas, Turnip, Parsnip, Cattle Carrot
Large Russian Raddish, for stock
Ne plus Mangel Wurtzel, from Coke's farm, England.
Rape Seed, Cattle Cabbage
Large Brunswick and Amsterdam Cabbage
Wethersfield and Mammoth Onion
Early Sieux and Sweet Corn, ripe in sixty days,
Mammoth Pumkin, Water-Melon, True Millet, &c.

C. has for Sale,

Agricultural Implements.

New York Premium Ploughs
Wood's Freeborn Patent do
Corn Shellers, Box Churns
Post Augurs, Turnip Slicers
Drill Machines, Hilling Hoes
Hay Knives, Grass and Bramble Scythes
Grass Hooks, Irish Shovels
Double twilled English Sacks
Dynometers and Lactometers
Flexible Tubes to relieve cattle when boven or choaked
Snathes and Sharpening Stones
Garden Cap Glasses
200 bright box English Spades
Garden Mats
Two French Mills, which grind coarse or fine
Canary, Rape and Hemp Seeds, for birds
Oak chests of polished Garden Tools
100 Sorts of Garden Implements
24 do Medical and Culinary herbs, neatly put up by the Shakers—Also, their Seeds, in small papers—English Split Peas

BOOKS on Gardening, Botany and Agriculture, with beautiful coloured plates

94 beautiful Chinese Paintings of Fruit and Flowers.

A few Agricultural Almanacks, to be sold cheap.

FLOWER ROOTS.

Ranunculaces—double Anemonies—Dalias
Tuberoses—Lillies—Tiger Flowers

Any person wishing to purchase Peach, and other *Fruit Trees*, which can be relied on at New York prices; grown by a private gentleman, can be supplied.

C. expects by the first arrival from England, a supply of Agricultural Seeds—Early Potatoes—Plants—Books—Rose Trees—Garden and flower Seeds, which he is determined to sell at a small advance

Seeds, &c. made up for the West Indies, Western Country and Southern States.

A Threshing Machine made in this city; price 200 dollars

Two very handsome Ornamental Bird Houses.

All orders executed with care and dispatch. Printed Catalogues of the above articles can be had at his store.

County of Westmoreland, Va.

FOR SALE,

Seven hundred and sixty nine acres of valuable land, lying in the county of Westmoreland Va. about six miles below Nomony Ferry, on the main road, leading to Kensale, Northumberland Court House, &c &c. and is contiguous to the navigable waters of Mechodoc and Yiocomoco creeks. At least three fourths of this land is in wood, 139 acres of which is in original growth of Oak and Hickory timber, the balance is well set with Pine and Cedar, which is rendered valuable by its central situation, being convenient to all the markets of the waters of the Chesapeake, and particularly to those of the District of Columbia. This land is well watered, the situation healthy, and in an agreeable neighbourhood.

The terms are very liberal, and will be made accommodating; for further particulars apply by letter or otherwise, to John Murphy adjoining the premises, or to Thomas. A. Catesby Jones, near Georgetown D. C.

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